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ABSTRACT

Summaries of Scholastic Aptitude Test (SAT) score statistics (means, standard deviations, and the number of students taking the test) are presented for students grouped according to testing years (for 1956-57 to 1975-76) and according to high school classes (from 1966-67 to 1975-76). For recent years, mean scores for geographical regions and for students grouped according to selected responses to the Student Descriptive Questionnaire (SDQ) are also presented. The following trends are apparent: (1) a dramatic rate of increase in numbers of candidates taking the SAT from 1956-57 to 1964-65, a slower rate of increase from 1964-65 to 1969-70, then a decline to 1973-74; (2) stable mean SAT verbal and mathematical scores from 1956-57 to about 1962-63, then a fairly steady decline for both scores through 1975-76, (3) somewhat larger declines for verbal than for mathematical mean scores, and somewhat larger declines for both means in recent years. The information reported on the SDQ indicates that candidates from 1971-72 to 1975-76 are similar in terms of ethnic background, rank in class, and educational goals. There is, however, a trend away from liberal arts to other fields--primarily career-oriented fields such as business, education, and health. (Author/EVH)

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A Summary of SAT Score Statistics for College Board Candidates

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Introduction

This report summarizes certain available data concerning performance of students taking the Scholastic Aptitude Test (SAT) with an emphasis on the years from the mid-1960s to the present - the years during which the mean scores of students taking the SAT have declined. Section 1 gives an overview of trends in SAT performance from 1956-57 to the present. Section 2 presents certain additional comparisons of SAT candidates over the years 1971-72 to 1975-76 that were made possible by the introduction of the Student Descriptive Questionnaire and the Summary Reporting Service in 1971-72. Section 3 presents comparisons of SAT performance of students from the 1972-73, 1973-74, 1974-75, and 1975-76 high school classes grouped according to various biographical characteristics.

Section 1. Overview

Table 1 presents the means, standard deviations, and numbers of cases for all candidates taking the SAT, by year, from 1956-57 through 1975-76. The term "case" is used here to denote an attendance at an SAT administration. Thus, if a candidate attended two administrations within a year, he (she) is counted as two cases. In addition, candidates taking the test in more than one year (e.g., students taking the test as juniors and repeating as seniors) will appear in the counts for each of the years.

Although statistics based on testing year groups are not the most satisfactory ones, they are presented here because they are the ones for which the longest term comparisons can be made using available data. Tables presented later in this report will give shorter term comparisons for students grouped in a more meaningful way.

The following trends are apparent from Table 1:

a. A dramatic rate of increase in number of students taking the SAT from 1956-57 to 1964-65 and a slower rate of increase from 1964-65 to 1969-70; then a decline in numbers of candidates to 1973-74.

b. Apparently stable mean SAT verbal and mathematical scores for testing year candidates from 1956-57 to about 1962-63; then a fairly steady decline in means for both scores through 1975-76.

c. Somewhat larger declines for verbal than for mathematical mean scores, and somewhat larger declines for both means in more recent years.

It is worthy of note, and somewhat surprising, that mean scores remained relatively stable during the period 1956-57 to 1962-63 when numbers of students taking the test were increasing significantly from year to year, since under these conditions the groups of students taking the test would be expected to differ from year to year on a number of characteristics that might be related to test performance. Paradoxically, the decline in mean scores occurred mainly in a period when the numbers of students taking the test were more nearly constant from year to year.

Tables A.1 and A.2 in the appendix present more detailed breakdowns for the testing years from 1966-67 through 1975-76, giving information comparable to that in Table 1 for students classified by sex and grade level. Table 2 presents frequency and percentage distributions of

Table 1. Means, Standard Deviations, and Numbers of Cases* for all Candidates Taking the SAT, by Year, 1956-57 through 1975-76

Testing year	SAT-verbal		SAT-mathematical		
	Mean	SD	Mean	SD	N/1000
1956-57	473	105	496	111	270.5
1957-58	472	106	496	109	376.8
1958-59	475	106	498	110	469.7
1959-60	477	108	498	109	564.2
1960-61	474	108	495	109	716.3
1961-62	473	109	498	112	802.5
1962-63	478	109	502	111	933.1
1963-64	475	108	498	113	1,163.9
1964-65	473	108	496	112	1,361.2
1965-66	471	108	496	111	1,381.4
1966-67	467	109	495	110	1,422.5
1967-68	466	108	494	112	1,543.8
1968-69	462	108	491	111	1,585.6
1969-70	460	110	488	113	1,605.9
1970-71	454	109	487	113	1,537.2
1971-72	450	108	482	112	1,459.9
1972-73	443	107	481	112	1,398.4
1973-74	440	107	478	115	1,354.0
1974-75	437	108	473	114	1,371.2
1975-76	429	109	470	118	1,415.0

*The term "case" denotes attendance at an SAT administration. Thus, if an individual was tested twice, he (she) is counted twice in these tabulations.

verbal and mathematical scores for the period 1966-67 through 1975-76. These distributions (also based on all candidates tested in a given year) indicate that the declines in means are not solely attributable to increased numbers of lower scoring students. On the verbal test, the percentage of students scoring over 600 declined from over 12 percent in 1966-67 to under 8 percent in 1975-76 -- a decline in absolute numbers from nearly 180,000 to less than 110,000. On the mathematical test, the comparable decline was smaller with about 18 percent scoring over 600 in 1966-67 compared to about 15 percent in 1975-76.

It should be noted that although there has been a study decline over this period in percentage of students scoring over 600, the sharp declines in numbers of students scoring over 600 began in 1970-71 for the verbal test and 1971-72 for the mathematical test. Prior to 1970-71, the total number of candidates was increasing from year to year, the increase being evident mainly in lower score intervals. The numbers of students scoring over 600 were relatively constant, but these students were a smaller percentage of the total test-taking group.

As was indicated earlier, statistics for testing-year groups are somewhat unsatisfactory. Because of this, since 1971-72, SAT scores have also been analyzed for students grouped by high school graduating

classes (or "cohorts"). When data are presented in this way, the figures for any given year apply to all students from the given high school classes who took the SAT at any time in their high school careers (through the spring of the senior year). For example, statistics for the 1975-76 class are based on students taking the test as seniors in 1975-76, as juniors in 1974-75, and (in a very small number of cases) as sophomores in 1973-74. Each student is counted only once, and the most recent score is used for students repeating the test.

Although statistics for cohort groups have been calculated only since 1971-72, it was possible to use information on students repeating the test to estimate the comparable statistics for graduating classes from 1966-67 through 1970-71. Because these estimates were formed by actually subtracting out the known scores for repeaters, they are judged to be very close estimates of the true figures, and, in fact, comparison of the results of this estimation procedure with the actual results for later years suggests that the means are probably within one point of the true values.

Table 3 presents cohort group means, standard deviations and number of cases for SAT-V and SAT-M for the period 1966-67 through 1975-76. Figures are given separately for males, females and total groups. The total group means for the high school classes are very similar to those for the testing year groups given earlier and indicate a decline of 35 points in the verbal mean and of 20 points in the mathematical mean since 1966-67. Although means for cohort groups are not available for earlier years, the close correspondence of means for cohort and testing year groups for the years for which both are available suggests that the total decline in high school class means from 1962-63 to the present would be very close to the 49 points on SAT-V and 32 points on SAT-M observed for candidates grouped on a testing year basis.

For the verbal test, the decline has been somewhat greater for females than for males -- 38 compared to 30 points for high school classes from 1966-67 through 1975-76. For the mathematical test, the declines in mean scores for the two sexes are very similar, being slightly larger for females. It should be noted that the numbers of females relative to numbers of males taking the SAT have been increasing over this period. Girls taking the SAT in the mid-1960s may well have been a more select group relative to boys taking the SAT than the comparable more recent groups.

Section 2. Five-Year Comparisons of SAT Candidates

The introduction of a Student Descriptive Questionnaire (SDQ) in 1971-72 and a Summary Reporting Service permits a number of additional comparisons of students from the classes of 1971-72 through 1975-76. Table 4 presents a comparison of responses to a number of SDQ questions for students from those classes who completed the SDQ. Two particular cautions are in order in interpreting these data:

a. SDQ results for the 1971-72 class are based on students participating as seniors and do not include more than 200,000 students from that class who participated as juniors only in 1970-71. Thus the figures for this year are not strictly comparable to those for later years.

b. Not all students who take the SAT complete the SDQ, and not all SDQ

Table 2. Numbers (in thousands) and Percentages of Candidates in Given Score Ranges on the Scholastic Aptitude Test, 1966-67 through 1975-76

a. Verbal

Score range	1966-67 N	(percent)	1967-68 N	(percent)	1968-69 N	(percent)	1969-70 N	(percent)	1970-71 N	(percent)
700-800. . .	33.2	(2.3)	30.5	(2.0)	27.9	(1.8)	27.6	(1.7)	25.6	(1.7)
600-699. . .	145.3	(10.2)	156.7	(10.1)	157.0	(9.9)	161.7	(10.1)	145.2	(9.4)
500-599. . .	339.4	(23.9)	360.8	(23.4)	379.3	(23.9)	378.4	(23.6)	361.8	(23.5)
400-499. . .	503.5	(35.4)	534.9	(34.6)	548.8	(34.6)	530.9	(33.1)	520.2	(33.8)
300-399. . .	325.4	(22.9)	378.1	(24.5)	377.7	(23.8)	401.7	(25.0)	385.7	(25.1)
200-299. . .	75.7	(5.3)	82.9	(5.4)	94.9	(6.0)	105.4	(6.6)	98.6	(6.4)
	1422.5		1543.8		1585.6		1605.9		1537.2	

Score range	1971-72 N	(percent)	1972-73 N	(percent)	1973-74 N	(percent)	1974-75 N	(percent)	1975-76 N	(percent)
700-800. . .	20.0	(1.4)	16.0	(1.1)	16.8	(1.2)	14.8	(1.1)	15.9	(1.1)
600-699. . .	130.7	(9.0)	112.2	(8.0)	104.3	(7.7)	95.5	(7.0)	92.3	(6.5)
500-599. . .	332.5	(22.8)	300.1	(21.5)	279.6	(20.6)	289.4	(21.1)	273.1	(19.3)
400-499. . .	493.4	(33.8)	470.2	(33.6)	463.7	(34.2)	468.5	(34.2)	474.2	(33.5)
300-399. . .	378.6	(25.9)	390.7	(27.9)	378.5	(28.0)	376.4	(27.4)	405.8	(28.7)
200-299. . .	104.7	(7.2)	109.2	(7.8)	111.2	(8.2)	126.7	(9.2)	153.6	(10.9
	1459.9		1398.4		1354.0		1371.2		1415.0	

(continued)

Table 3. Means, Standard Deviations, and Numbers of Cases, SAT-Verbal and SAT-Mathematical, for High School Classes, 1966-67 through 1975-76

SAT-verbal

	Males			Females			Total		
Class	Mean	SD	N/1000	Mean	SD	N/1000	Mean	SD	N/1000
1966-67. . . .	463	109		468	108		466	108	
1967-68. . . .	464	111		466	108		466	110	
1968-69. . . .	459	110		466	109		463	110	
1969-70. . . .	459	111		461	110		460	111	
1970-71. . . .	454	111		457	109		455	111	
1971-72. . . .	454	112	523.8	452	110	499.1	453	111	1022.8
1972-73. . . .	446	110	515.9	443	107	498.9	445	108	1014.9
1973-74. . . .	447	111	492.6	442	108	492.6	444	110	985.2
1974-75. . . .	437	111	496.9	431	108	499.6	434	109	996.4
1975-76. . . .	433	111	494.6	430	110	505.2	431	110	999.8

SAT-mathematical

	Males			Females			Total		
Class	Mean	SD	N/1000	Mean	SD	N/1000	Mean	SD	N/1000
1966-67. . . .	514	113		467	103		492	111	
1967-68. . . .	512	116		470	107		492	114	
1968-69. . . .	513	116		470	105		493	113	
1969-70. . . .	509	117		465	106		488	114	
1970-71. . . .	507	117		466	105		488	113	
1971-72. . . .	505	118	523.7	461	108	499.0	484	115	1022.7
1972-73. . . .	502	117	515.9	460	106	498.8	481	113	1014.7
1973-74. . . .	501	119	492.6	459	108	492.5	480	116	985.1
1974-75. . . .	495	119	496.8	449	107	499.5	472	115	996.4
1975-76. . . .	497	123	494.6	446	111	505.2	472	120	999.8

All figures for 1966-67 through 1970-71 are estimates. See text.

respondents take the SAT. Thus, summaries of SDQ responses for any year are not based on a group identical to the SAT candidates from that class. However, the overlap of the two groups is very large, and summaries of SDQ responses may be taken as reasonably accurate indicators of the composition of the SAT candidate group.

It appears from the self-report information in Table 4 that SDQ respondent (and probably SAT candidates) from the five classes are similar in terms of ethnic background, rank in class, and educational goals. There is, however, a trend away from liberal arts to other fields — primarily career-oriented fields such as business, education, and health. (A change in the choices for this question starting with the 1974-75 SDQ may have had some effect on responses, but the consistency of the trend over time is marked.) There is also a rise in reported parental income as would be expected because of inflation.

Table 4. Summary of Responses to Selected Questions on the Student Descriptive Questionnaire for Respondents from the Classes of 1971-72 through 1975-76

	1971-72[1]	1972-73	1973-74	1974-75	1975-76
1. Ethnic background:					
Percent minority. .	13	13	14	14	15
2. Rank in class:					
Percent in top fifth	48	47	48	48	48
3. Educational goals:					
Percent two year. .	8	7	7	7	6
Percent four year .	30	29	29	29	29
Percent graduate/ professional. . .	37	36	39	40	41
Percent undecided .	25	27	26	24	24
4. Intended field of study[2]:					
Percent liberal arts.	49	44	44	38	33
Percent engineering . . .	6	6	5	7	8
Percent other fields.	40	45	43	49	53
Percent undecided .	5	7	9	7	5
5. Parental income:					
Average	NA	$15,900	$17,600	$19,000	$20,000

Note: All percentages are based on number responding. Percentages may total to more or less than 100 for items 3 and 4 because of rounding.

1. 1971-72 figures based only on responses of those members of the class participating as seniors.

2. Calculated by collapsing more detailed categories reported in College-Bound Seniors for each year.

Table 2. (continued)

b. Mathematical

Score range	1966-67 N	(percent)	1967-68 N	(percent)	1968-69 N	(percent)	1969-70 N	(percent)	1970-71 N	(percent)
700-800. . .	55.5	(3.9)	56.2	(3.6)	55.9	(3.5)	56.0	(3.5)	55.7	(3.6)
600-699. . .	199.0	(14.0)	225.9	(14.6)	224.0	(14.1)	224.4	(14.0)	222.9	(14.5)
500-599. . .	413.3	(29.1)	442.2	(28.6)	454.1	(28.6)	457.7	(28.5)	428.3	(27.9)
400-499. . .	465.8	(32.7)	478.5	(31.0)	495.1	(31.2)	497.6	(31.0)	483.2	(31.4)
300-399. . .	248.1	(17.4)	282.4	(18.3)	296.3	(18.7)	303.5	(18.9)	291.9	(19.0)
200-299. . .	40.7	(2.9)	58.6	(3.8)	60.2	(3.8)	66.6	(4.1)	55.2	(3.6)
	1422.5		1543.8		1585.6		1605.9		1537.2	

Score range	1971-72 N	(percent)	1972-73 N	(percent)	1973-74 N	(percent)	1974-75 N	(percent)	1975-76 N	(percent)
700-800. . .	44.3	(3.0)	44.8	(3.2)	46.3	(3.4)	45.5	(3.3)	44.1	(3.1)
600-699. . .	203.2	(13.9)	184.0	(13.2)	175.9	(13.0)	168.7	(12.3)	169.8	(12.0)
500-599. . .	415.3	(28.4)	402.8	(28.8)	365.2	(27.0)	360.6	(26.3)	371.2	(26.2)
400-499. . .	449.4	(30.8)	429.1	(30.7)	413.1	(30.5)	413.1	(30.1)	425.6	(30.1)
300-399. . .	290.2	(19.9)	280.8	(20.1)	291.6	(21.5)	315.1	(23.0)	314.3	(22.2)
200-299. . .	57.6	(3.9)	57.0	(4.1)	61.9	(4.6)	68.1	(5.0)	89.9	(6.4)
	1459.9		1398.4		1354.0		1371.2		1415.0	

With the introduction of the Summary Reporting Service summaries of SAT performance for students grouped by state and region have also become available. The regional summaries for students from the classes of 1971-72 through 1975-76 are given in Table 5. It is apparent that the decline in mean scores was not limited to any one section of the country with all regions showing some decline for both SAT-V and SAT-M over the four years. The declines for New England, the Middle States, the South, and the Southwest are very close to the national figures. Those for the West are larger, while those for the Midwest are smaller.

Table 5. Means, Standard Deviations, and Numbers of Cases of SAT-V and SAT-M Scores for High School Classes, 1971-72 through 1975-76, by Region

		SAT-V		SAT-M		
	Class	Mean	SD	Mean	SD	N/1000
New England.	1971-72	456	108	482	111	115.1
	1972-73	447	105	482	109	112.2
	1973-74	447	107	479	112	111.3
	1974-75	437	105	471	110	115.7
	1975-76	435	107	472	116	117.2
Middle States.	1971-72	453	110	484	113	358.7
	1972-73	447	107	484	112	341.6
	1973-74	445	108	481	115	335.1
	1974-75	433	107	471	113	342.8
	1975-76	431	108	472	118	341.8
South.	1971-72	429	114	455	116	159.9
	1972-73	424	111	455	113	153.6
	1973-74	426	112	455	115	151.5
	1974-75	416	111	447	114	159.6
	1975-76	413	113	445	119	165.7
Midwest.	1971-72	464	108	500	116	193.2
	1972-73	458	106	498	114	177.9
	1973-74	459	108	502	117	154.5
	1974-75	451	108	497	118	142.8
	1975-76	451	109	499	122	140.7
Southwest.	1971-72	452	111	483	112	55.9
	1972-73	443	108	479	111	56.8
	1973-74	444	109	480	115	53.1
	1974-75	436	109	472	114	54.2
	1975-76	433	110	471	117	54.8
West	1971-72	467	110	497	116	131.8
	1972-73	455	110	490	115	135.5
	1973-74	454	111	488	116	136.1
	1974-75	441	110	478	117	144.5
	1975-76	435	112	478	120	147.8

Section 3. Comparisons of Students from the 1972-73, 1973-74, 1974-75, and 1975-76 Classes Grouped by SDQ Responses

Table 6 gives SAT verbal and mathematical means and percentages of cases for students from the 1972-73, 1973-74 1974-75, and 1975-76 classes grouped according to SDQ responses indicating high school type, type of high school program, size of high school class, rank in class, weighted grade average, number of scholastic honors earned, educational goals, intended college major, and parental income. These data are based on samples of nearly 100,000 cases each drawn from the nearly 1,000,000 students from each of these classes taking the SAT. Comparison of sample characteristics with known characteristics of the total groups for each year indicates that the samples very closely represent the total groups. In some cases where the questionnaires differed, categories have been combined to yield comparable groups. In addition, choices selected by very few students have, in some cases, been grouped together.

Table 6 also shows the differences in SAT verbal and mathematical means between 1972-73 and 1975-76 for each subgroup. In most cases, the declines for subgroups are not very different from the 14 point mean verbal decline and 9 point mean mathematical decline for the total groups over this period. All but a few of the small subgroups show some decline for both scores.

The general picture presented by Table 6 is of a highly consistent pattern of declining scores across nearly all subgroups identified by these SDQ responses. Some detailed observations are warranted, however:

a. Differences in response rates and in the score levels of non-respondents across the years appear to have had an effect on some year-to-year comparisons and should be taken into account when the data are examined in detail.

b. The results for students grouped by self-reported class rank and high school average suggest that groups of students reporting relatively low academic standing may have somewhat larger declines. For at least high school average, however, the possible effects of grade inflation should be considered. If it is assumed that inflation has occurred, any correction for such inflation would have the effect of moving more of the recent students to lower grade intervals. This would result in somewhat higher within group mean scores for the more recent year and thus reduce the size of the apparent decline.

Another interesting characteristic of the tables for class rank and high school average is a tendency for the lower achieving groups to exhibit mathematical declines that equal or exceed verbal declines.

c. The trend toward career fields and away from arts and sciences when students report their intended college major is apparent here as it was in Table 4. In addition, it can be seen that the within group declines are relatively small when students are grouped according to whether their intended major is a career or an arts and sciences field. These facts taken together are consistent with a theory attributing part of the decline in scores to changing composition of the test-taking population. That is, one interpretation is that career-oriented college-bound students and liberal arts students each have small mean score declines over these four years and that the larger total group declines are due to the entry of considerable numbers of generally lower scoring career-oriented

Table 6. SAT Mean Scores for Samples of Students from the 1972-73, 1973-74, 1974-75, and 1975-76 Classes, Classified by Responses to Selected SDQ Questions

	1972-73			1973-74			1974-75			1975-76			Differences in means 1972-73 to 1975-76	
	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	SAT-V	SAT-M
1. High school type:														
Public	63.0	449	488	67.7	446	484	65.9	437	477	63.5	437	480	12	8
Private	13.4	460	488	14.6	458	484	14.5	448	476	13.6	448	479	12	9
No response	23.6	425	460	17.7	426	461	19.6	416	451	22.9	407	445	18	15
2. High school program:														
Academic	61.6	464	503	64.3	463	500	62.8	454	493	59.6	455	499	9	4
General	9.9	403	436	11.9	400	433	11.6	392	427	11.5	389	426	14	10
Career/other	3.8	372	399	4.9	375	401	5.2	366	396	5.4	365	393	7	6
No response	24.8	424	459	18.8	425	461	20.4	415	450	23.5	407	444	17	15
3. Class size:														
Less than 100	6.8	448	479	7.3	446	478	7.0	435	467	6.9	432	466	16	13
100-249	15.9	449	484	15.9	445	478	15.8	435	472	15.4	436	475	13	9
250-499	22.1	455	493	23.4	451	488	23.6	443	482	22.9	443	485	12	8
500-749	15.1	457	497	16.0	457	494	16.2	444	485	15.9	445	490	12	7
750 or more	14.7	443	483	17.6	441	479	16.2	433	473	14.8	431	474	12	9
No response	25.5	426	460	19.9	427	461	21.1	417	452	24.1	409	446	17	14
4. Class rank:														
Top tenth	15.3	538	584	16.5	538	585	16.9	524	575	17.0	524	580	14	4
Second tenth	15.9	473	512	18.6	466	505	20.2	455	496	19.1	455	500	18	12
Second fifth	17.2	435	473	20.7	424	457	22.7	414	449	20.7	414	452	21	21
Third fifth	14.2	391	423	15.3	382	409	15.6	374	402	15.8	371	400	20	23
Bottom two-fifths	2.1	370	399	1.7	360	385	1.6	350	376	1.4	347	372	23	27
No response	35.4	422	455	27.2	428	462	23.0	417	451	26.0	408	445	14	10

(continued)

Table 6 (Continued)

	1972-73			1973-74			1974-75			1975-76			Differences in means 1972-73 to 1975-76	
	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	SAT-V	SAT-M
5. Average grades:														
3.75-4.00	11.5	539	580	12.6	541	585	12.7	528	577	13.1	527	580	12	0
3.50-3.74	9.2	496	533	9.9	496	533	10.2	483	522	10.5	482	525	14	8
3.25-3.49	9.7	472	512	10.6	469	507	10.9	459	499	10.8	455	495	17	13
3.00-3.24	12.7	447	486	14.0	442	478	14.1	430	468	13.5	425	467	22	19
2.75-2.99	8.6	428	463	9.5	421	452	9.6	407	441	9.0	406	442	22	21
2.50-2.74	9.0	406	442	9.6	401	432	9.2	391	423	8.4	388	421	18	21
2.25-2.49	5.9	391	428	6.1	383	417	5.8	375	408	5.0	368	403	23	25
2.00-2.24	4.5	377	410	4.5	368	400	4.0	359	394	3.6	356	388	21	22
Less than 2.00	3.2	364	397	3.1	356	388	2.5	347	378	2.1	340	373	24	24
No response	25.7	425	459	20.1	427	461	21.0	416	451	24.0	408	445	17	14
6. Scholastic honors:														
0	37.3	423	460	38.0	418	454	37.3	411	448	34.8	410	449	13	11
1-2	22.1	465	503	24.0	461	496	24.6	448	488	23.9	448	491	17	12
3-4	8.1	495	531	9.1	489	526	9.4	476	516	9.4	476	520	19	11
5-6	3.0	512	549	3.3	503	540	3.4	491	532	3.5	492	535	20	14
7 or more	2.7	524	562	3.2	518	557	3.2	507	544	3.4	506	548	18	14
No response	26.8	427	462	22.3	432	467	22.1	420	455	25.0	411	448	16	14
7. Educational goals:														
2-year technical	3.8	382	414	3.6	376	409	3.4	367	405	3.3	366	402	16	12
2-year liberal arts	1.4	382	405	1.6	377	395	1.5	369	392	1.4	370	388	12	17
Bachelors degree	22.0	440	476	23.1	436	471	23.1	425	462	21.9	424	465	16	11
Masters	14.2	469	506	15.4	467	502	16.5	454	493	16.5	454	497	15	9
Doctorate/professional degree	12.6	499	540	14.5	498	537	14.9	486	529	14.5	486	533	13	7
Other/undecided	20.1	439	477	20.8	433	469	19.1	424	462	17.7	423	462	16	15
No response	26.0	425	460	21.1	427	462	21.7	417	452	24.7	408	446	17	14

(continued)

Table 6 (Continued)

	1972-73			1973-74			1974-75			1975-76			Differences in means 1972-73 to 1975-76	
	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	SAT-V	SAT-M
8. Intended college major[1]:														
Agriculture	1.7	427	471	1.9	426	468	1.9	423	459	1.9	426	462	1	9
Architecture	1.4	438	515	1.5	436	504	1.5	430	507	1.5	434	517	4	(+2)
Business	7.1	409	463	8.2	406	457	8.1	406	461	8.0	413	471	(+4)	(+8)
Education	7.5	418	449	6.5	417	448	7.1	405	434	6.6	405	431	13	18
Home economics	1.2	413	441	1.3	407	437	0.7	409	442	0.6	410	436	3	5
Journalism/communication	1.6	476	483	1.8	472	470	2.2	458	461	2.2	465	468	11	15
Nursing/health	6.8	419	444	8.2	417	445	8.7	410	444	9.1	409	444	10	0
Vocational tech.	1.9	400	450	1.9	389	436	1.9	370	405	2.0	365	392	35	58
Miscellaneous career	.0	-	-	0.7	444	520	4.1	419	460	6.1	419	463	na	na
Subtotal career	29.2	419	457	32.0	417	455	36.4	411	450	37.9	414	453	5	4
Art	2.8	440	451	2.8	432	441	1.8	435	445	1.2	438	443	2	8
Biological science	9.2	493	533	10.1	488	528	8.8	481	525	7.6	483	530	10	3
English	2.5	500	481	2.6	496	473	2.4	488	465	2.1	489	469	11	12
Foreign languages	1.3	491	498	1.3	483	494	1.0	481	486	0.8	485	487	6	11
Mathematics	2.4	481	595	2.6	479	584	1.9	463	580	1.4	472	594	9	1
Music	2.0	465	487	2.1	462	479	1.8	448	464	1.6	452	468	13	19
Philosophy/religion	0.7	479	500	0.5	476	489	0.6	469	484	0.4	478	495	1	5
Physical science	2.8	505	570	2.9	503	568	2.3	501	565	2.1	506	572	(+1)	(+2)
Social science	11.1	476	490	11.8	463	477	9.4	465	476	7.6	464	475	12	15
Subtotal arts and science	34.7	482	512	36.6	475	504	30.0	472	501	25.0	475	505	7	7
Engineering	4.0	460	548	4.0	465	554	5.4	450	541	6.2	452	530	8	(+2)
Other/undecided	5.0	446	489	7.0	435	473	6.1	438	477	5.2	446	485	0	4
No response	27.1	422	457	20.4	430	463	22.2	416	451	25.8	408	446	14	11

1. Differences between this table and the percentages reported for the major field groups in Table 4 are due to (a) the fact that samples rather than entire populations were used for this table, (b) assignment of specific fields to different categories in a small number of cases, and (3) treatment of nonrespondents as a separate category in this table. Both this table and Table 4 show clearly the trend from liberal arts to career fields, although the precise percentages may differ somewhat (even after the differences in treatment of nonrespondents is accounted for). Results in this table also differ slightly from those reported in the first version of this paper (for 1973-74 and 1974-75) because of reassignment of specific fields to new categories.

(continued)

Table 6 (Continued)

	1972-73			1973-74			1974-75			1975-76			Differences in means 1972-73 to 1975-76	
	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	Percent	Mean SAT-V	Mean SAT-M	SAT-V	SAT-M
9. Parental income:														
Less than $3,000 . . .	1.7	370	405	1.5	367	401	1.4	360	394	1.4	360	397	10	8
$3,000 - 5,999 . . .	4.4	402	434	3.9	391	425	3.5	38[illegible]	418	3.2	378	412	24	22
6,000 - 7,499 . . .	4.2	421	456	3.6	413	445	3.1	3[illegible]6	431	2.8	391	425	30	31
7,500 - 8,999 . . .	5.0	433	470	4.0	425	459	3.5	411	447	3.1	404	439	29	31
9,000 - 10,499 . . .	7.1	442	479	5.9	434	470	5.0	419	454	4.0	416	452	26	27
10,500 - 11,999 . . .	6.2	447	487	5.5	440	475	5.0	427	467	4.2	426	467	21	20
12,000 - 13,499 . . .	5.8	452	491	6.0	443	478	5.8	431	472	5.0	430	472	22	19
13,500 - 14,999 . . .	5.3	461	500	4.6	450	488	4.8	439	479	4.3	436	479	25	21
15,000 - 17,999 . . .	7.5	469	507	8.2	454	492	8.9	441	482	8.2	440	482	29	25
18,000 or more	17.0	483	523	22.5	467	503	26.9	463	502	28.9	462	507	21	15
No response.	36.0	431	465	34.3	444	479	32.1	427	463	34.9	420	457	11	8

students into the pool. It would also appear to be possible, however, for these results to have been produced simply by changing preferences among college-bound students. The groups taking the SAT may have changed little demographically, but more of the middle scoring students may be expressing interest in career fields compared to arts and sciences, resulting in larger numbers in the career group and smaller within group declines for both groups. It may be noted that this second explanation does not require the loss of the traditional college-bound student from the pool (but merely a change in interests), while the first explanation suggesting the entry of a new group would entail a large loss in traditional arts and sciences students since the total N's have been fairly constant. The data reported here do not permit a certain choice between these possibilities. In addition, the question is complicated by a change in this portion of the questionnaire in 1974-75 which may have affected patterns of response. This issue will be explored in greater depth in a separate paper.

d. The relatively large declines for many of the intervals for parental income would be moderated somewhat if inflation were taken into account.

Similar analyses were carried out for a number of additional SDQ variables, but are not reported here. Included among these other variables were reported grades in specific courses and number of courses taken in certain subject matter areas, participation in extracurricular activities, and other SDQ responses. In all cases for which the numbers of students responding were sufficient to permit accurate estimation of mean differences and for which questionnaires were consistent over the years, the means for the more recent subgroups were lower than were those for the earlier subgroups.

Summary

1. SAT verbal and mathematical mean scores have declined steadily for groups of candidates taking the test since 1962-63. When data are analyzed for members of high school classes taking the SAT (rather than all candidates tested in a given year) similar declines are observed.
2. Examination of score distributions indicates that the declines are not attributable solely to increased numbers of low scoring students. Both percentages and numbers of high scoring students have declined -- with the decline in numbers beginning in about 1970-71.
3. Responses of students from the last five high school classes to the Student Descriptive Questionnaire suggest that the students from these classes taking the SAT are similar in terms of several background characteristics, but there is a marked trend toward career fields and away from arts and sciences in choice of an intended major field. Whether this last finding is simply due to changes in patterns of choice among the customary SAT taking group or to entry of new kinds of students into the pool (or to a combination of both) is uncertain.
4. Mean scores of students from the last four high school classes taking the SAT have declined in all regions of the country though there are some regional differences in amount of decline.
5. When samples of students from the last four high school classes are grouped according to responses to a number of questions bearing on their backgrounds, high school preparation, and educational plans, nearly all subgroups show some decline from 1972-73 to 1975-76, with the declines in most cases close to those for the total group.

APPENDIX

Supplementary Tables

Table A1. Ten-Year Summary Statistics for SAT-verbal, All Candidates Tested 1966-67 through 1975-76

Year and grade level	Male N	Male Mean	Male SD	Female N	Female Mean	Female SD	Total[a] N	Total[a] Mean	Total[a] SD
1966-67:									
Juniors	262,669	473	108	235,963	479	106	498,636	476	108
Seniors	475,148	461	109	384,828	466	109	859,982	463	109
All grades[b]	777,250	465	109	645,217	471	108	1,422,479	467	109
1967-68:									
Juniors	307,493	468	108	282,382	473	103	589,879	470	105
Seniors	490,737	463	111	399,977	464	109	890,721	463	110
All grades[b]	837,315	464	110	706,511	467	106	1,543,839	466	108
1968-69:									
Juniors	314,223	465	106	293,667	469	105	607,896	467	105
Seniors	498,462	457	110	415,925	464	110	914,395	460	110
All grades[b]	852,105	460	108	733,439	466	108	1,585,560	462	108
1969-70:									
Juniors	310,715	464	109	297,908	466	105	608,629	465	107
Seniors	504,588	457	112	429,712	458	111	934,324	458	112
All grades[b]	854,275	459	111	751,539	461	109	1,605,851	460	110
1970-71:									
Juniors	307,109	461	108	302,493	462	104	609,606	461	106
Seniors	460,715	449	110	403,251	452	109	863,981	450	110
All grades[b]	805,706	453	110	731,456	456	107	1,537,186	454	109
1971-72:									
Juniors	293,458	456	105	292,302	454	103	585,774	455	104
Seniors	430,208	447	111	390,534	444	110	820,763	446	110
All grades[b]	754,404	451	109	705,484	448	108	1,459,924	450	108

(continued)

Table A1. (Continued)

Year and grade level	Male			Female			Total[a]		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
1972-73:									
Juniors	280,566	450	105	285,738	448	102	570,066	449	104
Seniors	400,108	441	110	373,242	437	107	779,205	439	108
All grades[b]	708,006	445	108	679,905	442	105	1,398,354	443	107
1973-74:									
Juniors	276,934	444	104	279,294	437	101	556,602	441	103
Seniors	369,627	443	111	360,272	437	109	730,434	440	110
All grades[b]	682,870	443	109	670,044	437	106	1,353,971	440	107
1974-75:									
Juniors	274,049	446	104	274,135	448	103	548,702	447	104
Seniors	379,095	432	111	373,183	428	108	753,180	430	110
All grades[b]	690,984	437	109	678,651	436	107	1,371,232	437	108
1975-76:									
Juniors	278,654	440	106	285,665	440	105	564,790	440	105
Seniors	386,896	426	110	387,597	420	110	775,348	423	110
All grades[b]	705,519	431	109	707,977	428	109	1,414,961	429	109

a. The total N for "Total" includes candidates who did not indicate sex.
b. The total N for "All Grades" includes candidates who are not juniors or seniors.

Table A2. Ten-Year Summary Statistics for SAT-mathematical, All Candidates Tested 1966-67 through 1975-76

Year and grade level	Male			Female			Total[a]		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
1966-67:									
Juniors	262,669	525	111	235,763	485	99	498,636	506	107
Seniors	475,148	511	113	384,828	463	103	859,982	490	111
All grades[b]	777,250	515	113	645,217	470	102	1,422,479	495	110
1967-68:									
Juniors	307,493	522	110	282,382	483	100	589,879	504	107
Seniors	490,737	509	117	399,977	466	107	890,721	490	115
All grades[b]	837,315	513	115	706,511	471	105	1,543,839	494	112
1968-69:									
Juniors	314,223	515	110	293,667	474	98	607,896	495	106
Seniors	498,462	510	116	415,925	465	105	914,395	490	114
All grades[b]	852,105	511	114	733,439	468	103	1,585,560	491	111
1969-70:									
Juniors	310,715	514	112	297,908	476	100	608,629	495	108
Seniors	504,588	506	118	429,712	462	108	934,324	486	116
All grades[b]	854,275	508	116	751,539	466	105	1,605,851	488	113
1970-71:									
Juniors	307,109	513	114	302,493	474	102	609,606	494	110
Seniors	460,715	503	117	403,251	462	106	863,981	484	114
All grades[b]	805,706	505	116	731,456	466	105	1,537,186	487	113
1971-72:									
Juniors	293,458	510	110	292,302	472	100	585,774	491	107
Seniors	430,208	498	118	390,534	453	107	820,763	477	115
All grades[b]	754,404	502	115	705,484	460	105	1,459,924	482	112

(continued)

Table A2. (Continued)

Year and grade level	Male N	Male Mean	Male SD	Female N	Female Mean	Female SD	Total[a] N	Total Mean	Total SD
1972-73:									
Juniors	280,566	511	112	285,738	468	101	570,066	489	109
Seniors	400,108	498	117	373,242	455	106	779,205	477	114
All grades[b]	708,006	503	116	679,905	460	105	1,398,354	481	112
1973-74:									
Juniors	276,934	508	116	279,294	467	104	556,602	487	112
Seniors	369,627	495	120	360,272	454	110	730,434	474	117
All grades[b]	682,870	498	119	670,044	458	108	1,353,971	478	115
1974-75:									
Juniors	274,049	510	114	274,135	464	105	548,702	487	112
Seniors	379,095	489	118	373,183	442	106	753,180	466	114
All grades[b]	690,984	496	117	678,651	450	106	1,371,232	473	114
1975-76:									
Juniors	278,654	507	114	285,665	459	105	564,790	483	112
Seniors	386,896	490	124	387,597	438	111	775,348	464	120
All grades[b]	705,519	496	120	707,977	445	109	1,414,961	470	118

a. The total N for "Total" includes candidates who did not indicate sex.
b. The total N for "All Grades" includes candidates who are not juniors or seniors.